Might *Diostrombus sp.* (Derbidae) be a vector of CSPWD ?

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I - Transmission trials with 4 species of *Diostrombus*

4,380 *Diostrombus* on 1 seedling (D4)

positive amplification :
- direct PCR **P1/P7**
- direct PCR **G813/GAKSR**

G813/GAKSR PCR product cloned and sequenced :
➡ **CSPWD phytoplasma**

But : - 18 months later, no disease symptoms
- further analyses (months +2 and +4) negative

Hypothesis

a) Plants too young : phytoplasma can't develop ?

b) Cage effect (shade, protection from biotic and abiotic agression)

c) Uneven distribution of the phytoplasma in the plant

II- Tests on insects after «acquisition phase»

- 5 insects species were released during 24h on diseased coconut (stage 1)
- Each species was introduced in a sleeve on one leaf, under shade.

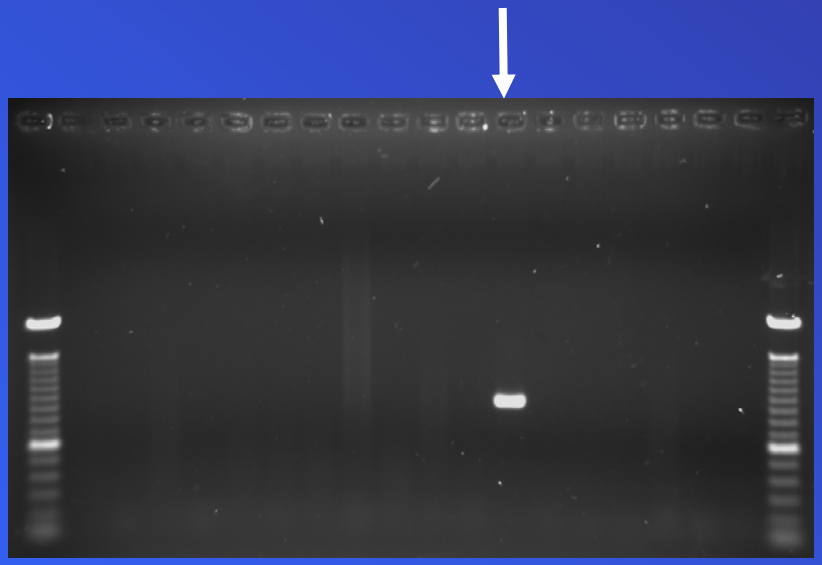
DNA Extraction from 1 or 2 insects / PCR tests

Derbids

Myndus	**41 insects**	**49 insects**	**50 insects**	140 *M. adiopodoumeensis*
	26 DNA	30 DNA	30 DNA	
GRD	**29 insects**	**51 insects**	**50 insects**	130 *D. mayumbensis*
	20 DNA	31 DNA	30 DNA	
WBD	**42 insects**	**51 insects**	**50 insects**	143 *D. nitidus*
	26 DNA	31 DNA	30 DNA	
BLD	**28 insects**	**50 insects**	**50 insects**	128 *D. dilatatus*
	19 DNA	30 DNA	30 DNA	
Metaphenice	**40 insects**	**49 insects**	**42 insects**	131 *M. stellulata*
	25 DNA	30 DNA	26 DNA	

Total : 672

- Nested PCR – P1/P7 then G813/GAKSR - on *D. mayumbensis*



D. mayumbensis

Nested PCR product cloned and sequenced

➡ **CSPWD phytoplasma**

Conclusion :

- Positive amplification in direct PCR with coconut DNA
- 1 *D. mayumbensis* positive in Nested PCR G813/GAKSR

➡ ***D. mayumbensis* is a potential candidate for CSPWD transmission**